



**MOMIT**  
MULTI-SCALE OBSERVATION  
AND MONITORING OF RAILWAY  
INFRASTRUCTURE THREATS



Universitat d'Alacant  
Universidad de Alicante

# Kinematic Analysis Tool

## Description

**Kinematic Analysis Tool (KAT)** is an Excel spreadsheet programmed in Visual Basic for Applications (VBA) for performing kinematic analysis of rocky slopes. The data can be introduced by hand or can be imported from Discontinuity Set Extractor (DSE) software (<http://hdl.handle.net/10045/50025>)

You are free to use them for any purposes, including commercially or for education. We would greatly appreciate an acknowledgement. Preferably, in the form of a citation and a link to the webpage:

*Tomás, R., Pagán, J.I., Riquelme, A., Cano, M., Pastor, J.L. (2019). Kinematic Analysis Tool, KAT (Version 3) [Computer software]. Available from <http://hdl.handle.net/10045/90669>*

Please, feel free to make questions, report bugs or make suggestions to the authors through an e-mail.

## How to use this software

This software performs conventional kinematic analysis of rocky slopes based on next input parameters:

- Dip direction of the slope ( $\alpha_f$ )
- Dip of the slope ( $\Psi_f$ )
- Dip direction of the discontinuity ( $\alpha_p$ ) or trend of line of intersection of two discontinuities for wedges ( $\alpha_i$ )
- Dip of the discontinuity ( $\Psi_p$ ) or plunge of the intersection line of two discontinuities for wedges ( $\Psi_i$ )
- Friction angle of the discontinuity/ies ( $\phi$ )

The orientation of the discontinuities can be, optionally, uploaded from the outputs created by file Dipdir-Dip-Density created by the open source software DSE.

The friction angle is an optional parameter. When it is not provided the software performs only a geometrical analysis.



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## Credits

This software is licensed under a Creative Commons Attribution-Non Commercial-No Derivatives 4.0 International License and has been developed in the framework of the EU project MOMIT by:

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